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WO 02/101094 A1

(54) Title: MICROBIAL IDENTIFICATION CHIP BASED ON DNA-DNA HYBRIDIZATION

(57) Abstract: The present invention provides methods and compositions for the identification of microbial species from a variety of sources, including clinical specimens, food, environmental samples, waste or drinking water samples and industrial samples. In particularly preferred embodiments, the present invention provides a DNA "chip" containing bacterial genomic sequences arranged in a microarray for bacterial identification.

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US02/17757

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : C12Q 1/68; C12M 1/34; C07H 21/04  
US CL : 435/6, 287.2; 536/23.1, 23.7, 24.32

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 435/6, 287.2; 536/23.1, 23.7, 24.32

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,228,575 B1 (GINGERAS et al) 08 May 2001 (08.05.2001), see entire reference, especially column 7, line 51; column 8, lines 22-33; column 8, line 46-column 9, line 15; column 10, line 39-column 12, line 61; column 20, line 25-column 21, line 7; column 23, line 10-column 24, line 9; claims 1, 18-30, 61, 75, 77-84; Figures 16-20.	1-3, 5-11, 13-15
Y	HOFFNER, S.E. Pulmonary infections caused by less frequently encountered slow-growing environmental mycobacteria. European Journal of Clinical Microbiology and Infectious Diseases. November 1994, Vol. 13, No. 11, pages 937-941, especially page 938.	4, 12, 16-21
Y	AHERN, H. Biochemical, reagent kits offer scientists good return on investment. The Scientist. July 1995, Vol. 9, No. 15, page 20, see entire reference, especially page 4 of 5.	16-21
X, P	CHO et al. Bacterial species determination from DNA-DNA hybridization by using genome fragments and DNA microarrays. Applied and Environmental Microbiology. August 2001, Vol. 67, No. 8, pages 3677-3682, see entire reference, especially pages 3678-3679 and 3682.	1-15
Y, P		16-21

Further documents are listed in the continuation of Box C.

See patent family annex.

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"P" document published prior to the international filing date but later than the priority date claimed		

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INTERNATIONAL SEARCH REPORT

PCT/US02/17757

**Continuation of B. FIELDS SEARCHED Item 3:**  
USPT, DWPI, Medline, Lifesci, Scisearch, Embase, Biosis, CAPlus  
search terms: microarray, array, chip, biochip, microchip, nucleic acid, DNA, oligonucleotide, gene, bacteri###, detect###, identif#####, determin#####, ratio; inventors' names